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an exchange-coupling breaking layer is disposed between said read-out auxiliary layer and said recording layer, a first surface of the exchange-coupling breaking layer being disposed in contact with the read-out auxiliary layer and a second surface of the exchange-coupling breaking layer opposite the first surface being disposed in contact with the read-out layer, the auxiliary read-out layer comprises GdFe, and said exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFe or TbFeCo.

REMARKS

Claims 1-8 are pending in the application. Claims 5-8 are withdrawn from consideration as being directed to a non-elected invention. In the Office Action of April 16, 2003 the Examiner made the following disposition:

- A.) Rejected claims 1-4 under 35 U.S.C. §103(a) as being unpatentable over *Shimazaki et al.* in view of *Aratani et al.*
- B.) Rejected claims 3 and 4 under 35 U.S.C. §103(a) as being unpatentable over *Shimazaki et al.* in view of *Aratani et al.* and further in view of *Nishimura et al.*

Applicants respectfully traverse the rejections and address the Examiner's disposition as follows:

- A.) Rejection of claims 1-4 under 35 U.S.C. §103(a) as being unpatentable over *Shimazaki et al.* in view of *Aratani et al.*:

Applicants respectfully disagree with the rejection.

Regarding claim 1:

Claim 1 has been amended to clarify that the exchange-coupling breaking layer is disposed between and in contact with the read-out layer and the recording layer. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**".

Claim 1, as amended, claims an exchange-coupling breaking layer disposed between and in contact with a read-out layer and a recording layer. The exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFeCo or TbFeCo.

This is clearly unlike *Shimazaki et al.* in view of *Aratani et al.*, which fails to disclose or suggest Applicants' claimed layer structure. Referring to *Shimazaki* Figure 46, *Shimazaki* discloses a GdFeCo layer 4a, a TbFeCoNb layer 4b, and a TbFeCo layer 4c. *Shimazaki* also

discloses that a nitride or oxide layer can be formed on any of these layers 4a-4c.

Unlike Applicants' claim 1, nowhere does *Shimazaki* disclose or suggest a nitride layer disposed between and in contact with its GdFeCo layer 4a and its TbFeCo layer 4c. Instead, *Shimazaki* teaches an intervening TbFeCoNb layer 4b. Therefore, *Shimazaki* fails to disclose Applicants' claim 1.

Aratani also fails to disclose or suggest an exchange-coupling breaking layer disposed between and in contact with a read-out layer and a recording layer, wherein the exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFeCo or TbFeCo.

Therefore, *Shimazaki* in view of *Aratani* still fails to disclose or suggest claim 1.

Regarding claim 2:

Claim 2 has been amended to clarify that the read-out auxiliary layer is disposed between the recording layer and the read-out layer and in contact with the recording layer, and that the exchange-coupling breaking layer is disposed between and in contact with the read-out layer and the read-out auxiliary layer.

Claim 2, as amended, claims a recording layer, a read-out auxiliary layer in contact with an exchange-coupling breaking layer, and a read-out layer in contact with the exchange-coupling breaking layer. The auxiliary read-out layer comprises GdFe. The exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFe or TbFeCo.

This is clearly unlike *Shimazaki* in view of *Aratani*, which fails to disclose or suggest Applicants' claimed layer structure. Referring to *Shimazaki* Figure 46, *Shimazaki* discloses a GdFeCo layer 4a, a TbFeCoNb layer 4b, and a TbFeCo layer 4c. *Shimazaki* also discloses that a nitride or oxide layer can be formed on any of these layers 4a-4c.

Unlike Applicants' claim 2, *Shimazaki* fails to disclose or suggest a read-out auxiliary layer comprising GdFe. Instead, *Shimazaki* discloses a TbFeCoNb layer 4b. Further, *Shimazaki* fails to teach a GdFe layer. Therefore, *Shimazaki* fails to disclose or suggest claim 2.

Aratani also fails to disclose a read-out auxiliary layer comprising GdFe. Therefore, *Shimazaki* in view of *Aratani* still fails to disclose or suggest claim 2.

Further, *Shimazaki* and *Aratani*, taken singly or in combination, fail to disclose or suggest an exchange-coupling breaking layer disposed between and in contact with a read-out layer and a read-out auxiliary layer, wherein the exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFe or TbFeCo. Therefore, for this additional reason, *Shimazaki* in view of *Aratani* fails to disclose or suggest claim 2.

Claims 3 and 4 depend directly or indirectly from claims 1 or 2 and are therefore allowable for at least the same reasons that claims 1 and 2 are allowable.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

B.) Rejection of claims 3 and 4 under 35 U.S.C. §103(a) as being unpatentable over Shimazaki et al. in view of Aratani et al. and further in view of Nishimura et al.:

Applicants respectfully disagree with the rejection.

Applicants' claims 1 and 2 are allowable over *Shimazaki* in view of *Aratani* as discussed above. *Nishimura* still fails to disclose or suggest Applicants' claimed layer structure. Therefore, *Shimazaki* in view of *Aratani* and further in view of *Nishimura* still fails to disclose or suggest claims 1 and 2.


Claims 3 and 4 depend directly or indirectly from claims 1 or 2 and are therefore allowable for at least the same reasons that claims 1 and 2 are allowable.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-4 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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In the Claims:

Please amend claims 1 and 2 as follows:

1. (Amended) A magnetically induced super resolution-type magneto-optical recording medium comprising, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, and a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, wherein:

an exchange-coupling breaking layer is disposed between said recording layer and said read-out layer, a first surface of the exchange-coupling breaking layer being disposed in contact with the recording layer and a second surface of the exchange-coupling breaking layer opposite the first surface being disposed in contact with the read-out layer, and

said exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFeCo or TbFeCo.

2. (Amended) A magnetically induced super resolution-type magneto-optical recording medium comprising, on a light-transmitting substrate, at least a recording layer for recording and retaining information therein, a read-out layer for copying therein the information retained in said recording layer during reproduction of the information, and a read-out auxiliary layer disposed between the recording layer and the read-out layer and in contact with the recording layer, wherein:

an exchange-coupling breaking layer is disposed between said read-out auxiliary layer and said recording layer, a first surface of the exchange-coupling breaking layer being disposed in contact with the read-out auxiliary layer and a second surface of the exchange-coupling breaking layer opposite the first surface being disposed in contact with the read-out layer,

the auxiliary read-out layer comprises GdFe, and

said exchange-coupling breaking layer comprises a layer of a nitride of either one of GdFe or TbFeCo.



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